

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 20826/309534	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/IB2004/002528	International filing date (day/month/year) 06 August 2004 (06-08-2004)	Priority date (day/month/year) 12 August 2003 (12-08-2003)	
International Patent Classification (IPC) or national classification and IPC IPC(7): B23K 26/20, B23K 26/16, B23K 26/32			
Applicant MAGNA INTERNATIONAL INC. ET AL			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. 1 and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). 4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application			
Date of submission of the demand 15 March 2005 (15-03-2005)		Date of completion of this report 25 August 2005 (25-08-2005)	
Name and mailing address of the IPEA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001(819)953-2476		Authorized officer <p style="text-align: center;">Hoan Huynh (819) 934-3467</p>	

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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Box No. I Basis of the report

1. With regard to the language, this report is based on:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
 - ☐ international search (Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (Rule 12.4(a))
 - ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - ☐ pages 1-5 as originally filed/furnished
 - ☐ pages* received by this Authority on _____
 - ☐ pages* received by this Authority on _____
 - ☐ the claims:
 - ☐ pages as originally filed/furnished
 - ☐ pages* as amended (together with any statement) under Article 19
 - ☐ pages* 6-7 (Claims 1-9) received by this Authority on Mar-04-2005
 - ☐ pages* received by this Authority on _____
 - ☐ the drawings:
 - ☐ pages 1-3 as originally filed/furnished
 - ☐ pages* received by this Authority on _____
 - ☐ pages* received by this Authority on _____
 - ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☒ the claims, Nos. 1-3 (as filed)
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing *(specify)*: _____
 - ☐ any table(s) related to sequence listing *(specify)*: _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing *(specify)*: _____
 - ☐ any table(s) related to sequence listing *(specify)*: _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-9</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-9</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-9</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: WO 90/11161 (Behler et al.) 04 October 1990

D1 disclosed an arrangement for laser lap welding of galvanized steel workpieces wherein at least one workpiece has indentations on one surface of the workpiece creating a recess when the two workpieces are juxtaposed with each other. The arrangement is designed so that the shaping is in the form of a straight knurl, a milling, or a series of indentations which can be produce by cold pressing, rolling, or stamping.

Novelty (N)

Claims 1-9 comply with PCT Article 33(2). The claims are consider to be new in view of the closest prior art, D1. D1 fails to teach the formation of a gap between the two workpieces by creating a raised region only on the first surface of the workpieces as claimed by claims 1-9.

Inventive Step (IS)

Claims 1-9 comply with PCT Article 33(3). The claims are considered to involved an inventive step since, having regard to the prior art, it is not obvious to a person skilled in the art at the releveant date.

Industrial Applicability (IA)

The subject matter of claims 1-9 is considered to be industrial applicable and thus fulfills the requirements of PCT Article 33(4).

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. The description does not comply with Rule 5.1 (ii) of the Regulations Under the PCT. The relevant background art, such as that cited here, must be discussed in the description to aid in the understanding, examining and searching of this application.
2. A statement in the description, such as found on page 1 which incorporates by reference any other document, does not comply with Article 5 of the PCT. The description should be complete in itself. A skilled person should be able to understand the specification without reference to any other document.

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What is claimed is:

1. A method of laser welding a plurality of coated metal sheets comprising the steps of:
 - providing coated sheets of metal having opposed first and second surfaces;
 - creating a raised region on at least one of the coated sheets, the raised region formed on the first surface and wherein the second surface remains continuous and uninterrupted;
 - juxtaposing the coated sheets to introduce a gap therebetween, said gap defined by said raised region;
 - applying a laser beam forming a laser weld wherein gases produced during the forming of the laser weld escape via the gap.
2. The method of laser welding a plurality of coated metal sheets according to Claim 1 wherein the step of creating a raised region comprises punching at least one embossment on at least one coated metal sheet, the embossment comprising a depression having a raised peripheral edge.
3. The method of laser welding a plurality of coated metal sheets according to Claim 1 wherein the step of creating a raised region comprises applying fine particles between the plurality of coated metal sheets.
4. The method of laser welding a plurality of coated metal sheets according to Claim 2 wherein said step of creating a raised region comprises punching an array of embossments.
5. The method of laser welding a plurality of coated metal sheets according to Claims 2 and 4 wherein the raised peripheral edge has a thickness of about 0.007 inches.
6. The method of laser welding a plurality of coated metal sheets according to Claim 1 wherein the step of creating a raised region comprises applying fine particles to the first surface of at least one coated metal sheet.

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7. The method of laser welding a plurality of coated metal sheets according to Claims 3 or 6, wherein said fine particles are plasma sprayed onto the coated metal sheet.
8. The method of laser welding a plurality of coated metal sheets according to Claim 7 wherein said fine particles are zinc dust.
9. The method of laser welding a plurality of coated metal sheets according to Claim 7 wherein said fine particles are steel dust.